

45 ANNIVERSARY of IUE Launch

The Technological Legacy of IUE

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- Enormous pleasure for ALL of us
 - to be able to participate in this event
 - to see again so many friends and colleagues with whom we worked in the IUE project, hard and enthusiastically.

- We express our gratitude to *our colleagues of NASA* for the help that they provided to us along the life of the project, and
- We praise the effort of the *Vilspa/ESAC friends* here present, who worked extensive and difficult times for the successful achievement of the project.
- These congratulations are extended to the IUE participants who could not attend to this event.

- Last but not least, we manifest our appreciation and merits recognition to our colleagues who, after dedicating their best efforts to the IUE Project, passed away

- During the life of the IUE Project, there was a worldwide extended variety of advances in the techniques involving solid state devices, computers and associated hardware and software.

- The IUE Project was fully immersed in the stream of those advances. The science and engineering staff working in the project had plenty of enthusiasm and motivation to pioneer many of the important developments in that epoch.

- It follows a brief summary of the outstanding contributions of the IUE teams to advances in the fields of
 - Spacecraft Operations
 - Image Processing
 - Database Techniques
 - Data Networks/Internet

■ SPACECRAFT OPERATIONS

- During the nearly 19 years (Jan 1978 – Sept 1996) of successful housekeeping, maneuvering, controlling and improving the subsystems aboard the IUE spacecraft, many unforeseen events and complicated circumstances had to be studied, analyzed and resolved by the IUE operation teams
 - › Of a high relevance for its impact and outcome in attitude control procedures was the study and developments performed after failure of several gyroscopes aboard the satellite.
 - › Attitude and control software was developed to use the Fine Sun Sensor and the Star Pointing device to overcome the lack of gyroscopes information

■ IMAGE PROCESSING

- The studies and developments made in the context of IUESIPS (IUE Image Processing System) and associated ramifications (FITS, IHAP,...), provided significant advance of the techniques used in photometric calibration, geometric correction and file compression applied to two-dimensional images.

■ DATABASE TECHNIQUES

- Transition from supply of the IUE scientific data to the observer on magnetic tapes, to immediate and universal availability of all the scientific information to the community.

■ DATA NETWORKS / INTERNET

- Leading the establishment of computer interconnection and earliest Local Area Networks
- Cooperation with other European Institutions in developments and tests to enhance and extend HEPNET (High Energy Physics Net) and SPAN (Space Physics Analysis Network)
- Ample collaboration with “*Telefónica-Fundesco*”, in the creation and set up of RedIRIS (Red española para Interconexión de los Recursos Informáticos de las universidades y centros de investigación).
- The first node in Spain connected to Internet (1990), was one of the IUE computers in Vilspa/ESAC.

Thank you very much for your attention !

**LOOKING FORWARD TO SEEING YOU
AT THE 50TH IUE ANNIVERSARY !!**